

116. For an inverter circuit adapted to be powered from a DC source and to provide an AC voltage of substantially trapezoidal waveshape across a pair of output terminals, an improved loading circuit comprising:

a series-connected combination of an inductor and a capacitor connected across said output terminals, said series-connected combination having a natural resonance frequency that is lower than the fundamental frequency of said AC voltage; and

load means connected in parallel with said capacitor, said load means being of a substantially non-inductive impedance.

117. For (an inverter circuit adapted to be powered from a DC source and to provide an AC voltage across a pair of output terminals,) the improvement comprising:

a series-connected combination of an inductor and a capacitor connected across said output terminals, said series-connected combination having a natural resonance frequency that is not higher than the fundamental frequency of said AC voltage;

means to permit connection of a load in circuit with said series-connected combination; and

capacitance means connected in parallel with said series-connected combination and operative to reduce rate-of-change of voltage between said output terminals.

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118. In an inverter adapted to be powered from a DC source having a center-tap and to provide an AC voltage output, said inverter comprising a pair of alternately conducting switching transistors connected by way of a mid-point in series across said DC source, said AC voltage output being provided between said center-tap and said mid-point, the improvement comprising:

a series-connected combination of an inductor and a capacitor connected between said center-tap and said mid-point, said series-connected combination having a natural resonance frequency that is not higher than the fundamental frequency of said AC voltage;

means to permit connection of a load in circuit with said series-connected combination; and

a diode means connected across each of said transistors;

thereby permitting the inductor and the capacitor to:
i) receive energy from the DC source by forward conduction of the transistors, and ii) return energy to the DC source by forward conduction of the diodes.

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119. In a self-oscillating inverter adapted to be powered from a DC source having a center-tap and to provide an AC voltage output, said inverter (comprising a pair of alternately conducting switching transistors connected by way of a mid-point in series across said DC source, said AC voltage output being provided between said center-tap and said mid-point,) the improvement comprising:

a series-connected combination of an inductor and a capacitor connected between said center-tap and said mid-point, said combination having a natural series-resonance frequency that is approximately equal to or lower than the fundamental frequency of said AC voltage;

means to permit connection of a load in circuit with said series-connected combination; and

capacitance means connected in parallel with said series-connected combination and operative to reduce rate-of-change of voltage between said center-tap and said mid-point.

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120. In an inverter adapted to be powered from a DC source having a center-tap and to provide an AC voltage output, said DC source being powered by way of rectifier means from two power line terminals connected with an ordinary electric utility power line, said inverter comprising a pair of alternately conducting switching transistors connected by way of a mid-point in series across said DC source, said AC voltage output being provided between said center-tap and said mid-point, the improvement comprising:

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load means connected between said center-tap and said mid-point; and

connect means connecting said center-tap with one of said power line terminals;

whereby one side of the load means is directly connected with one of said power line terminals.

121. A frequency converter means adapted to be powered from a pair of input terminals connected with an ordinary electric utility power line and operative to provide to a load an AC voltage of frequency substantially higher than that of the voltage on said power line, said frequency converter comprising:

rectifier-filter means connected in circuit with said pair of input terminals and operative to function as a center-tapped source of DC voltage, said source's center-tap being connected directly with one of said input terminals;